



# Texas Brine Company, LLC

1301 Highway 70  
Belle Rose, LA 70341  
Phone: 985-369-6657  
Fax: 985-369-7873



April 1, 2013

Commissioner James H. Welsh  
P.O. Box 94275  
Baton Rouge, LA 70804

**RE: In response to State of Louisiana Department of Natural Resources Office of Conservation's Second Amendment to Declaration of Emergency and Directive**

Commissioner Welsh,

In response to the Second Amendment and Declaration of Emergency and Directive order issued by the Louisiana Department of Natural Resources (LDNR), Office of Conservation on September 25, 2012, Texas Brine Company, LLC (TPC) understands the seven items listed in the document.

In the above mentioned, TBC was specifically directed and ordered to perform certain tasks outlined in the above mentioned document. Below are the required responses, as directed.

1. TBC's counsel provided LDNR legal counsel with a response to Directives 1-3 on September 28, 2012.
2. TBC understands Directive 4, which is to provide all daily logs and field notes from all contractors conducting investigation into subsidence and natural gas bubbling. The Daily Action Summary and results for current information can be found in the Attachment section of this report.
3. TBC understands Directive 5, which directs TBC to immediately allow for split or share any sample taken on site related to Well 3A (Serial Number 974265), the cavern, other wells facilities or other site locations. The Daily Action Summary of today's collection can be found in Attachment section of this report.
4. TBC understands Directive 6, which directs TBC to immediately report the results (final and preliminary) of any tests, logs samples or data collection performed on Well 3A, the cavern, other wells, facilities or site locations that indicate a change in any previously known conditions related to the investigation of the subsidence or natural gas bubbling

events, and continue to report any such results. The Daily Action Summary and the Results related to this Directive can be found in Attachment section of this report.

5. TBC understands the Directive 7, which states that TBC will provide a daily summary of all tests, or logs performed or samples taken from Well 3A and the cavern as well as any results of those tests or logs, including preliminary as of September 25, 2012 and going forward. The Daily Summary and Results related to this Directive can be found in Attachment section of this report.

Please note that the drilling rig used for the Observation Well 3A has been removed and the site is being rigged down and returned to pre-drilling condition. As such, daily drilling reports for this well have ceased. Plans are being made for longer term potential gas venting/flaring requirements and possible hydrocarbon material recover from Well 3A.

In addition, previous daily summary reports issued to LDNR have included significant duplicate information as there is a fair amount of overlap in the information requested in each of the Directives included in the September 25, 2012 order. All requested information associated with the Directives issued in the September 25, 2012 order are included in the Attachment section of this report.

TBC believes that the submittal of this report satisfies the requirements of the Declaration of Emergency and Directive issued on September 25, 2012. As directed this report is submitted by email to [conservationorder@la.gov](mailto:conservationorder@la.gov), ref. "Emergency Declaration-Texas Brine Company LLC-9/25/2012.



Bruce E. Martin

Vice President, Operations

Texas Brine Company, LLC

**Summary Table for Daily Events**

TBC Oxy Grand Bayou Data Management-Environmental											
Contractor	Responsibilities		Collected By		Date Collected	Delivered to Lab	Results from Lab	Laboratory	Method	Date to Agencies	
Sage	Stationary Air Monitoring		Steve Shaughnessy - 07:55 - 09:15, Pete Hyatt IV (Code Red) - 07:00 - 17:00, Steve Shaughnessy - 08:05 - 09:45, Pete Hyatt IV (Code Red) - 07:00 - 11:00, <del>Ricard Mukherjee - 08:00 - 09:45, Pete Hyatt IV (Code Red) - 07:00 - 11:00</del>		3/29 - 3/31/2013	NA	NA	NA	AreaRAE Monitors	3/30 - 4/01/2013	
	Residential Air Monitoring		Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities.		3/29 - 3/31/2013	NA	NA	NA	NA	3/30 - 4/01/2013	
	Gas Seep Sampling		No work performed		3/29 - 3/31/2013	NA	NA	NA	NA	3/30 - 4/01/2013	
	Well Gas Sampling		No work performed		3/29 - 3/31/2013	NA	NA	NA	NA	3/30 - 4/01/2013	
	Indoor Air Monitoring		No work performed		3/29 - 3/31/2013	NA	NA	NA	NA	3/30 - 4/01/2013	
Respec	Inclinometers/Tilt Meters		3/29 - 3/31/2013	No work conducted	No work conducted	NA	NA	NA	NA	NA	
	InSAR Reflector Installations		3/29 - 3/31/2013	No work conducted	No work conducted	NA	NA	NA	NA	NA	
	Subsidence Survey-Fenstermaker		3/29 - 3/31/2013	No work conducted	No work conducted	NA	NA	NA	NA	NA	
	Shallow Geophone Installation		3/29 - 3/31/2013	No work conducted	No work conducted	NA	NA	NA	NA	NA	
	Deep Geophone Installation		3/29 - 3/31/2013	No work conducted	No work conducted	NA	NA	NA	NA	NA	
	Amendment #3, Directive #2		3/29 - 3/31/2013	No work conducted	No work conducted	NA	NA	NA	NA	NA	
Miller	Weekly Stability Survey		Herchel Sauce		Mar. 28, 2013	NA	NA	NA	NA	NA	
	Misc. Survey Work		Kevin Pichoff		Mar. 28, 2013	NA	NA	NA	NA	NA	
	Sinkhole Hydro/Perimeter Survey		No Work Performed		Mar. 28, 2013	NA	NA	NA	NA	NA	
Pisani	Surface Water		NA		NA	NA	NA	NA	NA	NA	
	Well Water		NA		NA	NA	NA	NA	NA	NA	
	Geoprobe Wells		PMR		3/28/2013	4/1/2013	NA	GCAL	Chloride, Bromide and Sulfate (Inorganic Anions) – SW-846 9056A, Conductivity – SM 2510B, TDS – SM 2540C, Cations/metals – SW-846 6010B, Carbonate & Bicarbonate Alkalinity – SM 2320B, BTEX – SW-846 8260B, TPH Fractions – TX 1006/LA 1006, and Dissolved Gases - RSK-175, Chloride, Bromide and Sulfate (Inorganic Anions) – SW-846 9056A, Conductivity – SM 2510B, TDS – SM 2540C, Cations/metals – SW-846 6010B, Carbonate & Bicarbonate Alkalinity – SM 2320B, BTEX – SW-846 8260B, TPH Fractions – TX 1006/LA 1006, and Dissolved Gases - RSK-175	NA	NA
			NA		NA	NA	NA	NA	NA	NA	
Daily Operations at 3A			Summary of Today's events								
3/30 - 4/1/2013			New 3A								
			7am	593.67	3/30/2013						
			7am	588.28	3/31/2013						
			7am	581.02	4/1/2013						
			Relief Well #1								
3/30 - 4/1/2013			See ORW-01 Flare Spreadsheet								

Laboratory

Laboratory  
Lab Contact

Lab Contact

## **Attachments**

## **Daily Action Summary**

**March 29, 2013**

### **Stationary Air Monitoring**

- Steve Shaughnessy onsite from 07:55 to 09:15. Changed out the monitors between 08:22 and 09:05. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Pete Hyatt IV of Code Red (monitor sub-contractor) onsite from 07:00 to 17:00. Assisted in battery change outs and maintenance of the monitoring equipment.

### **Residential Air Monitoring**

- Not Scheduled

### **Gas Seep Sampling**

- Not Scheduled

### **Well Gas Sampling**

- Not Scheduled

### **Air Indoor Monitoring**

- Not Scheduled

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
03/29/2013 01:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9
03/29/2013 02:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.8
03/29/2013 03:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.6
03/29/2013 04:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.6
03/29/2013 05:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.6
03/29/2013 06:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.5
03/29/2013 07:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.5
03/29/2013 08:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.5
03/29/2013 09:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.6	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 11:00:00 AM	Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)				
03/29/2013 12:00:00 PM	Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)				
03/29/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.7	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.7	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9
03/29/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 05:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	<1.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	<1.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9

Notes:

From approximately 10:45 AM to 1:15 PM on 3/29/2013, data was not properly transmitted and stored due a data storage issue with the monitoring computer. This issue was resolved by the onsite technician and normal data collection resumed.

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
03/29/2013 05:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.6
03/29/2013 06:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.5
03/29/2013 07:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.5
03/29/2013 08:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.5
03/29/2013 09:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.6	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 11:00:00 AM	Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)					Data Not Transmitted (See Note)				
03/29/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.7	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.7	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9
03/29/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 05:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.6	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9
03/29/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	<1.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/29/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	<1.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	2.1	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	3.1	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	<1.0	3.1	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9

Notes:

From approximately 10:45 AM to 1:15 PM on 3/29/2013, data was not properly transmitted and stored due a data storage issue with the monitoring computer. This issue was resolved by the onsite technician and normal data collection resumed.



## **Daily Action Summary**

**March 30, 2013**

### **Stationary Air Monitoring**

- Steve Shaughnessy onsite from 08:05 to 09:45. Changed out the monitors between 08:33 and 09:29. Collected data from the monitoring database and forwarded to Jill Martin in the Baton Rouge office for processing.
- Pete Hyatt IV of Code Red (monitor sub-contractor) onsite from 07:00 to 11:00. Assisted in battery change outs and maintenance of the monitoring equipment.

### **Residential Air Monitoring**

- Not Scheduled

### **Gas Seep Sampling**

- Not Scheduled

### **Well Gas Sampling**

- Not Scheduled

### **Air Indoor Monitoring**

- Not Scheduled

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
03/30/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	2.1	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	3.1	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	<1.0	3.1	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 06:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	<1.0	3.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 07:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	<1.0	0.0	20.9	<1.0	3.3	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 08:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	21.1	<1.0	0.0	<1.0	0.0	20.9	<1.0	1.3	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 09:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 10:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 12:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 01:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 02:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 03:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 04:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 05:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 06:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 07:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 08:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 09:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 10:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 11:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 12:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
03/30/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	<1.0	3.1	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 06:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	<1.0	3.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 07:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	<1.0	0.0	20.9	<1.0	3.3	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 08:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	21.1	<1.0	0.0	<1.0	0.0	20.9	<1.0	1.3	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/30/2013 09:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 10:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 12:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 01:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 02:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 03:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 04:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 05:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 06:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 07:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 08:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 09:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 10:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/30/2013 11:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 12:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 01:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 02:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 03:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 04:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 05:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:

## **Daily Action Summary**

**March 31, 2013**

### **Stationary Air Monitoring**

- Bijet Mukherjee onsite from 08:00 to 09:45. Changed out the monitors between 08:25 and 09:32. Collected data from the monitoring database and forwarded to Steve Shaughnessy in the Baton Rouge office for processing.
- Pete Hyatt IV of Code Red (monitor sub-contractor) onsite from 07:00 to 11:00. Assisted in battery change outs and maintenance of the monitoring equipment.

### **Residential Air Monitoring**

- Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

### **Gas Seep Sampling**

- Not Scheduled

### **Well Gas Sampling**

- Not Scheduled

### **Air Indoor Monitoring**

- Not Scheduled

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
03/31/2013 01:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 02:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 03:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 04:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 05:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 06:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	1.1	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 07:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 08:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	<1.0	2.4	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 09:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.5	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.3	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.1	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.8	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.7	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.5	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.6	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	3.6	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 05:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.1	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	<1.0	<1.0	0.0	20.9
03/31/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	<1.0	<1.0	0.0	20.9
03/31/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	<1.0	<1.0	0.0	20.9
04/01/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	4.1	20.9	0.0	<1.0	<1.0	0.0	20.9

Notes:

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
03/31/2013 05:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 06:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	1.1	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 07:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 08:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	<1.0	2.4	20.9	0.0	0.0	0.0	0.0	20.9
03/31/2013 09:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.5	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.3	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.1	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.8	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.7	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.5	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.6	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	3.6	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 05:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.1	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	0.0	<1.0	0.0	20.9
03/31/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	<1.0	<1.0	0.0	20.9
03/31/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	<1.0	<1.0	0.0	20.9
03/31/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.0	20.9	0.0	<1.0	<1.0	0.0	20.9
04/01/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	4.1	20.9	0.0	<1.0	<1.0	0.0	20.9
04/01/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.7	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.1	20.9	0.0	<1.0	<1.0	0.0	20.9
04/01/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	4.5	20.9	0.0	0.0	<1.0	0.0	20.9
04/01/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	2.3	20.6	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.9	20.9	0.0	0.0	<1.0	0.0	20.9
04/01/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.1	20.6	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.8	20.9	0.0	<1.0	<1.0	0.0	20.9
04/01/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	3.2	20.6	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	4.9	20.9	0.0	<1.0	<1.0	0.0	20.9

Notes:

# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

## Daily Field Report

Report By: David Gnage

Date: 3-29-13

Company: RESPEC

Work Order #:                   ()

Personnel	Company	Job Title

**Time Onsite:**      Start Time: NA      End Time: NA

**Equipment Onsite:**

**Daily Activity:**      No Field Work Conducted. RESPEC not on-site.

**Proposed Schedule:** RESPEC is currently scheduled to be on-site Tuesday April 2<sup>nd</sup> afternoon/evening for safety training and equipment inventory. Proposed schedule: April 3<sup>rd</sup> site recon and initial mounting structure fabrication, April 4<sup>th</sup> install new structure for IPI-3 and maybe others depending on results of field recon. April 5<sup>th</sup> move and install IPI equipment. All dates and the scope are tentative.

Initials: DJG

# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

## Daily Field Report

Report By: David Gnage

Date: 3-30-13

Company: RESPEC

Work Order #:                   ()

Personnel	Company	Job Title

**Time Onsite:**      Start Time: NA      End Time: NA

**Equipment Onsite:**

**Daily Activity:**      No Field Work Conducted. RESPEC not on-site.

**Proposed Schedule:** RESPEC is currently scheduled to be on-site Tuesday April 2<sup>nd</sup> afternoon/evening for safety training and equipment inventory. Proposed schedule: April 3<sup>rd</sup> site recon and initial mounting structure fabrication, April 4<sup>th</sup> install new structure for IPI-3 and maybe others depending on results of field recon. April 5<sup>th</sup> move and install IPI equipment. All dates and the scope are tentative.

Initials: DJG



# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

## Daily Field Report

Report By: David Gnage

Date: 3-31-13

Company: RESPEC

Work Order #:                   ()

Personnel	Company	Job Title

**Time Onsite:**      Start Time: NA      End Time: NA

**Equipment Onsite:**

**Daily Activity:**      No Field Work Conducted. RESPEC not on-site.

**Proposed Schedule:** RESPEC is currently scheduled to be on-site Tuesday April 2<sup>nd</sup> afternoon/evening for safety training and equipment inventory. Proposed schedule: April 3<sup>rd</sup> site recon and initial mounting structure fabrication, April 4<sup>th</sup> install new structure for IPI-3 and maybe others depending on results of field recon. April 5<sup>th</sup> move and install IPI equipment. All dates and the scope are tentative.

Initials: DJG

## **ME&A Daily Action Summary**

March 28, 2013

### **Subsidence Survey:**

- Arrived @ 8:30 am
- Ran conventional level loop starting at TBM 2 which is a nail set in a power pole adjacent to the main roadway and OxyGeismar #2 well pad. Ran level loop through brine wells (1,2 & 3), water wells (1,2 & 3), TBM's, and the two brine storage tanks. Attached is a spreadsheet with the results

### **Sinkhole Perimeter/Hydrographic Survey:**

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- Horizontal and vertical survey of ORW wells that had been installed since last survey.
- Departed 1:30 pm

## **ME&A Daily Action Summary**

March 29, 2013

### **Subsidence Survey:**

- No Work Done

### **Sinkhole Perimeter/Hydrographic Survey:**

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- No Work Done

## **ME&A Daily Action Summary**

March 30, 2013

### **Subsidence Survey:**

- No Work Done

### **Sinkhole Perimeter/Hydrographic Survey:**

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- No Work Done

## **ME&A Daily Action Summary**

March 31, 2013

### **Subsidence Survey:**

- No Work Done

### **Sinkhole Perimeter/Hydrographic Survey:**

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- No Work Done

**Michael Pisani & Associates**  
**Texas Brine, L.L.C.**  
**Assumption Parish, Louisiana**  
**Daily Field Report**

Report By: Patrick Ritchie

Company: MP&A

Date: 3/28/2013

Work Order # 80-05

Health and Safety Meeting ☐ YES

☐ NO

Weather: 70 F Sunny

<u>Personnel</u>	<u>Company</u>	<u>Job Title</u>
<u>Charles Trahan</u>	<u>MP&amp;A</u>	<u>Geologist</u>
<u>Patrick Ritchie</u>	<u>MP&amp;A</u>	<u>Environmental Scientist</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

Site Activities:      Start Time      7:00      End Time      17:45

**Equipment On-site:**

**Daily Activity:**

Sampling of MRAA and MW wells

Estimated time of completion:

On-going

**Proposed schedule:**

Conduct in-situ monitoring surface water transect and industrial water well locations

Measure water level for the industrial water wells

Measure pressure and water level at TBC Geoprobe locations

On-going

Initials: PMR

**Michael Pisani & Associates**  
**Texas Brine, L.L.C.**  
**Assumption Parish, Louisiana**  
**Daily Field Report**

Report By: Patrick Ritchie

Company: MP&A

Date: 3/29/2013

Work Order # 80-05

Health and Safety Meeting ☐ YES

☐ NO

Weather: 70 F Sunny

<u>Personnel</u>	<u>Company</u>	<u>Job Title</u>
<u>Patrick Ritchie</u>	<u>MP&amp;A</u>	<u>Environmental Scientist</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

Site Activities:      Start Time 7:00      End Time 13:45

**Equipment On-site:**

**Daily Activity:**

Sampling of MRAA and MW wells

Estimated time of completion:

On-going

**Proposed schedule:**

Conduct in-situ monitoring surface water transect and industrial water well locations

Measure water level for the industrial water wells

Measure pressure and water level at TBC Geoprobe locations

On-going

Initials: PMR

**Michael Pisani & Associates**  
**Texas Brine, L.L.C.**  
**Assumption Parish, Louisiana**  
**Daily Field Report**

Report By: Patrick Ritchie

Company: MP&A

Date: 3/30/2013

Work Order # 80-05

Health and Safety Meeting ☐ YES ☐ NO

Weather: \_\_\_\_\_

Personnel	Company	Job Title
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Site Activities:      Start Time \_\_\_\_\_ End Time \_\_\_\_\_

**Equipment On-site:**

**Daily Activity:**

No Field Activities

Estimated time of completion:

On-going

**Proposed schedule:**

Conduct in-situ monitoring surface water transect and industrial water well locations

Measure water level for the industrial water wells

Measure pressure and water level at TBC Geoprobe locations

On-going

Initials: PMR



**Michael Pisani & Associates**  
**Texas Brine, L.L.C.**  
**Assumption Parish, Louisiana**  
**Daily Field Report**

Report By: Patrick Ritchie

Company: MP&A

Date: 3/31/2013

Work Order # 80-05

Health and Safety Meeting ☐ YES ☐ NO

Weather: \_\_\_\_\_

Personnel	Company	Job Title
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Site Activities:      Start Time \_\_\_\_\_ End Time \_\_\_\_\_

**Equipment On-site:**

**Daily Activity:**

No Field Activities

Estimated time of completion:  
On-going

**Proposed schedule:**

Conduct in-situ monitoring surface water transect and industrial water well locations  
Measure water level for the industrial water wells  
Measure pressure and water level at TBC Geoprobe locations

On-going

Initials: PMR